

### DETAILED ACTION

1. The following **Final Action** is on merits in response to a communication received on **3/26/08**

#### *Acknowledgement*

2. The **amendments** with **claims 2-7, 12, 14, 17 and 19** received on **3/26/2008** have been entered. As such **Claims 2-19** are pending.

#### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claims 2-19** rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In **claims 2, 4, and 17**, the recitations, "structural panel unit" is a new matter not described and not found in the specification.

In **claim 2**, the recitation, "being flexible" is a new matter not described and not found in the specification.

In **claim 19**, the recitations, "of unitary, laterally flexible" and "reduced lateral flexibility ... continuously" are also new matter, not described and not found in the specification.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 2-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Leung** (2002/0046514) in view of **May** (114,584).

**As per claim 19** , **Leung** discloses a wall frame structure (**510, Fig.11**) having an enclosing rectangular frame work ( **610, Fig.13**) comprising side and end members, and a plurality of pairs of unitary, laterally flexible load-bearing strut members (**22s**) extending in contained relation between said framework end members, having intermediate longitudinal portions of each said strut members (**22s**) pair in alternating converging and diverging mutually inclined flexed relation, to form a series of interstitial openings within said framework (**Figs. 10,11 and 13**), wherein portions of said strut member pairs (**22s**) are in adjoined, mutual laterally constrained relation, and are

collectively in laterally constrained relation by said framework side members (**510, Fig. 11**), to provide shortened strut member portions of enhanced stiffness and reduced lateral flexibility extending continuously in connected load-bearing relation (between) with said framework end members (**Fig. 11**; via shortened members **22s** to side and frame members **12s**).

**Leung** fails to disclose explicitly load-bearing strut members extending in contained relation between said framework end members, having intermediate longitudinal portions of each said strut member pair in alternating converging and diverging mutually inclined relation, to form a series of interstitial openings

However, **May** in the same field of invention discloses load-bearing strut members extending in contained relation between said framework end members, having intermediate longitudinal portions of each said strut member pair in alternating converging and diverging mutually inclined relation, to form a series of interstitial openings (**Fig.1-3** and general description of **Gratings** and implied use as struts for wall frame structure with all intended modifications by developed technologies like spot welding and other fastening materials).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the disclosure of **Leung** and include the above feature as taught by **May** to facilitate in order to make interstitial openings and rigid load bearing (implied rigid gratings) capacity for the frame structure.

**As per claims 2 and 3, Leung** discloses said wall frame structure constitutes a structural panel unit, and said individual members (diagonals 22s of inclined two pairs)

are of slender section modulus, being flexible and prone to individually buckle under longitudinal compressive loading of said individual strut members said member pairs having their individual outer ends mutually joined (outer ends **26** and **30** joined), each said individual members of said pairs of members being substantially immobilized at location intermediate their respective ends to significantly reduce their respective tendency to deform under load and side-wall members of said frame laterally constrain said individual members that are in contacting relation with said frame side-wall members (via vertical members **12**).

**As per claim 4, Leung** discloses that the structural panel unit upper and lower end portions of each of said pairs of members are secured to each other, and at least one said intermediate transition portions of each of said pairs of members are secured to each other (**para [0034]**, and at least one strut member adjoined portion of a pair of said members is fastened in predetermined locations within said framework (by metal plate **30**).

**As per claim 5, Leung** discloses that upper and lower ends of a pair of said individual members are secured to each other, and attached to an adjoining, portions of said rectangular framework (**Fig.13**; via side extension)

**As per claim 7, Leung** discloses said rectangular framework enclosure includes face sheets in enclosing relation with said pairs, said pairs of strut members having edge portions thereof secured to adjoining surface portions of said face sheets (see para 0006; via plywood nailed to the **stud**).

**As per claims 10 and 11, Leung** discloses said strut member is laterally constrained substantially at its centre (centre **26**) by contact with adjoining pairs of said struts at the centre by the contact with an adjoining portion of said framework (**510**) by fastening means selected from the group consisting of nails, staples and glue, and combination thereof (by metal toothed plate **30**).

**As per claim 14, Leung** discloses said strut members are selected from the material group consisting of ply wood-based sheet board and metal (**para 0052**).

7. **Claims 6, 8, and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Leung** (2002/0046514) in view of **Kirk** (5,210,990).

**As per claims 6 and 8, Leung** discloses all the elements of the claimed invention, but failed explicitly to disclose said ends of a said pair of said strut members are glued to each other, and to say adjoining surface portions of said face sheets.

However, **Kirk** discloses the concept of having a wood composite C-channel framing lumber (see col. 3, lines 1-50) as member with ends and adjoining surface portion are glued to each other (see col. 3, lines 31-35) and said face sheets.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the member of **Leung** to include the C-channel framing lumber that are glued to each other as taught by **Kirk** in order to provide perfect straightness and uniform surface character.

As per claim 9, although Leung discloses a pair of member constrained at their centre, **Leung** fails to explicitly disclose strut member being constrained substantially at their centre by contact with adjoining pairs of said strut member.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to the pair of members of **Leung** to include the plurality of pairs adjointed at their centre since it has been held that the mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

8. Claims 12-13, 15-17 are rejected under 35 U.S.C. 103 (a) as being unpatentable over **Leung** (2002 /0046514) in views of **Cable** et al (4,235,054).

As per claims 12 and 13, **Leung** discloses all the elements of the claimed invention, but fails to explicitly disclose a laterally extending tension member securing intermediate transition portions at least some of said strut members in mutually adjointed back-to-back relation and the tension member is consisting of strapping.

However, **Cable** et al discloses the concept of having a laterally extending tension member (55) securing intermediate transition portions of webs (42) in mutually adjoining back-to-back relation (Fig. 2), and the tension member is an iron bar.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the panel of Leung to include the laterally strapping extending tension member as taught by Cable in order to provide lateral reinforcement of the wall section.

As per claims 15-17, **Leung** discloses the metal and plastic strut members having a profile cross section with side flanges extending for at least two or four portions of its length substantially planer end and centre portions.

However **Cable** discloses the concept of having metal studs including a profile section with side flanges (col. 2, lines 32-40 and Fig. 3-4).

Therefore, it would have been obvious to an ordinary skill in the art at the time of invention was made to modify the members of **Leung** to include the metal studs with flanges as taught by **Cable** in order to provide more load-bearing capacity and more rigidity.

9. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Leung** (2002/0046514) in view of **Griffin** (6,263,628).

As per claim 18, **Leung** discloses all elements of the invention, but fails explicitly to disclose plastic foam in supporting relation with said individual members within said interstices, in use to resist lateral deformation of said individual members are subjected to buckling due to compressive loading of said strut member.

However, **Griffin** discloses plastic foam in supporting relation with said interstices, in use to resist lateral deformation of said individual members when subjected to say compressive loading of said strut member (col.6 and lines 15-25; via foam core 12).

Therefore, it would have been obvious to an ordinary skill in the art at the time of invention was made to modify the wall panel of **Leung** to include the plastic foam in supporting relation with said members at said interstices.

### ***Response to Arguments***

10. **Applicant's** arguments filed on 3/26/08 have been fully considered but they are not persuasive.

**Applicant** argued (remark page 7, lines 14-22) that "In extreme contrast to May, laterally flexible stud members.....unsuited to the role of a load-bearing structure". **Examiner** respectfully does not agree and clarifies (**May**, page 1, general description) that "the grate - bars.....soft iron and hardened steel, formed as shown in **figs. 1 and 2**" is implied capable of forming load bearing structure than any other non-iron flexible material.

In response to **applicant's** further argument (remark page 8, line 12) that "It is significant interest that **Leung's** frames are.....to be entirely unsuited to assembly on the site" is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, **Leung** is a analogous art.



Finally as we understand, references are cited as they teach the concept of the invention, but not the complete invention applied for.

***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **HATEM ALI** whose telephone number is (571)270-3021. The examiner can normally be reached on 8.00 to 6.00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Abdi can be reached on 571-272-6702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Harish T Dass/  
Primary Examiner, Art Unit 3692

Hatem Ali  
Examiner  
Art Unit 3692